
Principles of Packaging

PKG3001 Section 1478

Class Periods: MWF | Period 3 | 9:35 A.M. – 10:25 A.M.

Location: ROG 129

Academic Term: Fall 2021

Instructor

Dr. William Pelletier

wpelletier@ufl.edu

(352) 294-6701

Office Hours: MWF 10:30 A.M. – 11:30 A.M. & and by appointment

Office Location: 101 Frazier Rogers Hall

Teaching Assistant

TBD

Course Description

Focuses on the materials, uses, functions and production processes of packaging. Topics include an industry overview and related applications as well as the historical, societal and technological drivers of packaging and how end-users decide on the product/package combination they use for their product and the impact these choices make on the product's market success.

3 Credits

Course Co-Requisites

N/A

Course Objectives

Students, upon completing this course, will be able to:

1. Explain the critical role of packaging systems.
2. Analyze the packaging industry, current and future trends.
3. Explain packaging materials in use.
4. Describe converting operations for packaging materials.
5. Form an opinion on the environmental issues related to packaging and society.
6. Understand packaging laws and regulations.

This course will help students develop their ability to: 2. apply both analysis and synthesis in the engineering design process, resulting in designs that meet desired needs; 3. communicate effectively with a range of audiences; 4. recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts; 5. function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty; 7. recognize the ongoing need for additional knowledge and locate, evaluate, integrate, and apply this knowledge appropriately.

The course will consist of three (3) lectures per week, quizzes, projects and examinations.

Materials & Supply Fees

N/A

Relation to Program Outcomes (ABET)

| Outcome | Coverage* |
|---|-----------|
| 1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics | |
| 2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors | Low |
| 3. An ability to communicate effectively with a range of audiences | Medium |
| 4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts | Medium |
| 5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives | Low |
| 6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions | |
| 7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies | Medium |

* Coverage is given as high, medium, or low. An empty box indicates that this outcome is not covered or assessed in the course.

Required Textbook & Software

No Required Textbook

Top Hat Pro (www.tophat.com) will be used for class participation and attendance. The cost for UF students is \$20 per semester. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. For instructions on how to create a Top Hat account and enrol in our Top Hat Pro course, please refer to the invitation sent to your school email address or consult Top Hat's Getting Started Guide (<https://bit.ly/31TGM1w>). If you already have a Top Hat account, go to <https://app.tophat.com/e/817186> to be taken directly to our course. If you are new to Top Hat, follow the link in the email invitation you received or:

- Go to <https://app.tophat.com/register/student>
- Click "Search by school" and input *University of Florida*
- Search for this course with the following join code: [817186]

If a paid subscription is required, it will be listed at checkout when you enroll in our Top Hat Pro course. Should you require assistance with Top Hat at any time please contact their Support Team directly by way of email (support@tophat.com), the in-app support button, or by calling 1-888-663-5491. Specific user information may be required by their technical support team when troubleshooting issues.

Optional Textbook

Soroka, Walter. 2014. Fundamentals of Packaging Technology 5th Edition. Institute of Packaging Professionals, Naperville, IL, U.S.A. 748 p.

Course Schedule (subject to change)

| | | | | | | | | | |
|--------|--------|--------|---|-------------------------|---------|--------|--------|---|------------------------------|
| Week 1 | 23-Aug | 27-Aug | M | Syllabus | Week 9 | 18-Oct | 22-Oct | M | Metal Cans & Containers |
| | | | W | Packaging Functions | | | | W | Glass Packaging |
| | | | F | Packaging Functions | | | | F | Glass Packaging |
| Week 2 | 30-Aug | 3-Sep | M | Packaging Functions | Week 10 | 25-Oct | 29-Oct | M | Review |
| | | | W | Packaging Functions | | | | W | Introduction to Polymers |
| | | | F | Packaging Functions | | | | F | Exam 2 |
| Week 3 | 6-Sep | 10-Sep | M | Labor Day | Week 11 | 1-Nov | 5-Nov | M | Introduction to Polymers |
| | | | W | Packaging Functions | | | | W | Shaping Plastics |
| | | | F | Graphic Design | | | | F | Shaping Plastics |
| Week 4 | 13-Sep | 17-Sep | M | Graphic Design | Week 12 | 8-Nov | 12-Nov | M | Shaping Plastics |
| | | | W | Graphic Design | | | | W | Shaping Plastics |
| | | | F | Printing & Decorating | | | | F | Plastic Applications |
| Week 5 | 20-Sep | 24-Sep | M | Printing & Decorating | Week 13 | 15-Nov | 19-Nov | M | Plastic Applications |
| | | | W | Printing & Decorating | | | | W | Corrugated Fiberboard |
| | | | F | Review | | | | F | Corrugated Fiberboard |
| Week 6 | 27-Sep | 1-Oct | M | Paper & Paperboard | Week 14 | 22-Nov | 26-Nov | M | Review |
| | | | W | Exam 1 | | | | W | Thanksgiving |
| | | | F | Paper & Paperboard | | | | F | Thanksgiving |
| Week 7 | 4-Oct | 8-Oct | M | Paper & Paperboard | Week 15 | 29-Nov | 3-Dec | M | Exam 3 |
| | | | W | Paperboard Cartons | | | | W | Student Presentations |
| | | | F | Homecoming | | | | F | Student Presentations |
| Week 8 | 11-Oct | 15-Oct | M | Paperboard Cartons | Week 16 | 6-Dec | 10-Dec | M | Student Presentations |
| | | | W | Metal Cans & Containers | | | | W | Student Presentations |
| | | | F | Metal Cans & Containers | | | | F | No Class |

Attendance Policy, Class Expectations, and Make-Up Policy

- Attendance (on time) at lectures is expected from all students at all times. Attendance accounts for 10% of your final grade and will be monitored using Top Hat. Students will be warned if they are late at several occasions. Following a second warning, late attendances will be counted as missed lectures.
- Specific directives will be provided for each assignment, but, in all cases, they will have to be submitted online through Canvas. Homework assignments and project reports must be turned in before class begins. Assignments submitted late, before 4:00 P.M. on the day they were due, will be marked down by 10% of their total. Assignments submitted late before 4:00 P.M. on the following day will be marked down by 50% of their total (assignments must be submitted through Canvas). No assignment will be accepted after 4:00 P.M. on the following day. For all online submissions, it is the student's responsibility to ensure that the correct file is uploaded on Canvas. If technical difficulties with Canvas were to occur, students can email the file to wpelletier@ufl.edu to avoid a late submission (if you email a copy, also upload a "late" copy in Canvas). Deadlines for assignments may change, please always follow directives provided for each assignment in Canvas.
- No make-up exams or quizzes will be given except for valid medical reasons or unless prior arrangements have been made.
- Exams will be taken in-person during our regular lecture time
- Excused absences must be consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation.

Evaluation of Grades

| Assignments | Percentage of Final Grade |
|---|---------------------------|
| Exams (tentative dates: 9/29, 10/29 & 11/29 at 9:35 A.M.) | 60% (20% each) |
| Homework Assignments, Quizzes & Discussions | 15% |
| Project & Presentation | 15% |
| Attendance | 10% |
| TOTAL | 100% |

Grading Policy

| Percent | Grade | Grade Points |
|-------------|-------|--------------|
| [90 – 100%] | A | 4.00 |
| [87 – 90%[| A- | 3.67 |
| [84 – 87%[| B+ | 3.33 |
| [80 – 84%[| B | 3.00 |
| [77 – 80%[| B- | 2.67 |
| [74 – 77%[| C+ | 2.33 |
| [70 – 74%[| C | 2.00 |
| [67 – 70%[| C- | 1.67 |
| [64 – 67%[| D+ | 1.33 |
| [60 – 64%[| D | 1.00 |
| [57 – 60%[| D- | 0.67 |
| [0 – 57%[| E | 0.00 |

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Students Requiring Accommodations Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

In-Class Recording Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include laboratory sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University Honesty Policy UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Conduct Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Jennifer Nappo, Director of Human Resources, 352-392-0904, jpennacc@ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

Campus Resources

Health and Wellness

COVID-19

- You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus.
- If you are withheld from campus by the Department of Health through Screen, Test & Protect, you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the UF Health Screen, Test & Protect website for more information. <https://coronavirus.ufhealth.org/screen-test-protect-2/frequently-asked-questions/covid-19-exposure-and-symptoms-who-do-i-call-if/>
- Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <https://counseling.ufl.edu/>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the *Office of Title IX Compliance*, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS) Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.ufl.edu>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>;
<https://care.dso.ufl.edu>.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.